MEDICAL POLICY

Excellus
An independent licensee of the Blue Cross Blue Shield Association

Medical Policy Title	**Knee Joint Procedures for Managed Medicaid (MMC), Health and Recovery Plan (HARP), Child Health Plus (CHP), and Essential Plan (EP) Members**
Policy Number	**7.01.123**
Current Effective Date	**January 1, 2027**
Next Review Date	**September 2027**

Our medical policies are guides to evaluate technologies or services for medical necessity. Criteria are established through the assessment of evidence based, peer-reviewed scientific literature, and national professional guidelines. Federal and state law(s), regulatory mandates and the member's subscriber contract language are considered first in the determination of a covered service.
(Link to Product Disclaimer)

SECTION LINKS

Knee Arthroplasty

Knee Arthroscopy and Associated Procedures

Ligament Reconstruction & Repair

Meniscal Procedures

Patellofemoral Realignment Procedures

Motion Restoration Procedures

Restorative Cartilage Procedures

POLICY STATEMENT(S)

Knee Arthroplasty

Total Knee Arthroplasty

I. Total knee arthroplasty is **medically necessary** when **ALL** the following are met:
   A. BMI 40 kg/m² or less;
   B. Pain results in functional impairment that limits range of motion and interferes with activities of daily living;
   C. Conservative management meets **either** of the following:
      1. Conservative management is not required when **any** of the following is documented:
         a. Osteonecrosis/Avascular Necrosis (AVN);
         b. Malignancy involving the knee or adjacent structures;
         c. Distal femur or proximal tibia malunion/nonunion fracture;
         d. Failed partial knee arthroplasty;

e. Severe deformity, condylar collapse, or end-stage bone-on-bone disease; **or**

2. For all other indications, conservative management must include **both** the following:

a. Physical Therapy (PT) meets **all** the following:

i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;

ii. Participation for a minimum of 6 weeks during the previous 6 months; **and**

iii. Failure to improve symptoms or functional impairments;

b. Pain management includes **any** of the following:

i. Non- pharmacologic pain management such as modification of activity/protective weight-bearing/use of an orthotic;

ii. Intra-articular corticosteroid injection; **or**

iii. Medication management (e.g., non-steroidal anti-inflammatory drugs [NSAIDS]); **and**

D. Condition includes **either** of the following:

1. Disease is progressed into an uninvolved compartment; **or**

2. **All** the following are met:

a. Arthritic condition includes **any** of the following:

i. Osteoarthritis;

ii. Inflammatory arthropathy;

iii. Post-traumatic arthritis; **and**

b. Knee pain causing loss of function for 12 weeks or more that interferes with activities of daily living;

c. Weight-bearing radiographs within the last 3 to 6 months demonstrate advanced degenerative joint disease including **one (1)** or more of the following:

i. Bone-on-bone contact involving two or more knee compartments;

ii. Marked narrowing of the joint space; **or**

iii. Moderate-to-severe osteoarthritic changes (Kellgren-Lawrence grade III or IV.

<u>Total Knee Arthroplasty-Revision</u>

II. Revision total knee arthroplasty is **medically necessary** when **ALL** the following are met:

A. BMI less than 40 kg/m^2;

B. Pain results in functional impairment that limits range of motion and interferes with activities of daily living;

C. Prosthetic failure or removal requirement due to infection;

D. Weight-bearing radiographs within the last 3 to 6 months or physical examination demonstrate **one (1)** or more of the following:

1. Aseptic loosening;
2. Component instability;
3. Component failure;
4. Prosthetic recall;
5. Osteolysis;
6. Periprosthetic infection;
7. Periprosthetic fracture;
8. Recurrent instability, dislocation, or subluxation.

III. Total knee arthroplasty is **not medically necessary** for **ANY** of the following contraindications:

A. Active local or systemic infection;

B. Uncontrolled diabetes mellitus (HbA1c greater than 8%);

C. Uncontrolled hypertension;

D. Nicotine or tobacco, including cigar, cigarette, e-cigarette, nicotine pouch, smokeless tobacco or vape pen use within 6 weeks of surgery;

E. Intra-articular corticosteroid injection within 12 weeks of surgery;

F. Clinically unstable or unmanaged comorbid condition(s);

G. Material allergy incompatible with implantation;

H. Untreated or unmanaged substance use disorder.

<u>Partial Knee Arthroplasty (PKA) or Unicompartmental Knee Arthroplasty (UKA)</u>

IV. A partial knee arthroplasty (PKA) or unicompartmental (UKA) knee arthroplasty is **medically necessary** when documentation supports **ALL** the following:

A. The remaining knee compartments do not demonstrate degenerative changes;

B. The anterior cruciate ligament is functional, either through native integrity or prior successful reconstruction/repair;

C. The individual has **one (1)** of the following:

1. Advanced unicompartmental osteoarthritis;
2. Isolated medial or lateral compartment osteoarthritis (Kellgren-Lawrence grade III or IV); **or**

3. Post-traumatic arthritis limited to a single compartment;

D. BMI is **either**:
   1. 40 kg/m² or less; or
   2. If BMI is 40 kg/m² or greater, documented weight reduction of at least 10% before surgery;

E. Conservative management must include **both** of the following:
   1. Physical Therapy (PT) meets **all** the following:
      a. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
      b. Participation for a minimum of 6 weeks during the previous 6 months; **and**
      c. Failure to improve symptoms or functional impairments;
   2. Pain management includes **any** of the following:
      a. Non- pharmacologic pain management such as modification of activity/protective weight-bearing/use of an orthotic;
      b. Intra-articular corticosteroid injection; **or**
      c. Medication management (e.g., NSAIDS);

F. Pain in the last 12 weeks (or more) has resulted in functional impairment that limits range of motion and interferes with activities of daily living or painful weight-bearing;

G. Physical examination is consistent with advanced unicompartmental disease and include **one (1)** or more of the following:
   1. Contracture;
   2. Crepitus;
   3. Correctable angular deformity (valgus deformity of 20 degrees or less or varus deformity of 15 degrees or less);
   4. Joint swelling or effusion;
   5. Instability; **or**
   6. Restricted range of motion;

H. Recent knee radiographs demonstrate at least **one (1)** of the following:
   1. Severe narrowing of the affected compartment joint space;
   2. Bone-on bone contact confined to a single compartment; **or**
   3. Moderate-to-severe osteoarthritic degeneration (Kellgren-Lawrence grade III or IV) within the last 3 to 6 months.

V. PKA or UKA are **contraindicated** when **ANY** of the following are present:
   A. Presence of osteoporosis or osteopenia;
   B. Active local or systemic infection;
   C. Uncontrolled diabetes mellitus (HbA1c greater than 8%);
   D. Nicotine or tobacco, including cigar, cigarette, e-cigarette, nicotine pouch, smokeless tobacco or vape pen use in the 6 weeks prior to surgery;
   E. Intra-articular corticosteroid injection in the operative joint within 12 weeks of surgery;
   F. Meniscectomy, total, in remaining compartment;
   G. Angular deformity or contracture (or contracture exceeding the specified range) with **any** of the following:
      1. Fixed valgus deformity greater than 20 degrees;
      2. Fixed varus deformity greater than 15 degrees;
      3. Flexion contracture of at least 15 degrees;
      4. Flexion of less than 110 degrees;
   H. Clinically unstable or unmanaged comorbid condition(s);
   I. Material allergy incompatible with implantation;
   J. Untreated or unmanaged substance use disorder.

<u>Patellofemoral Arthroplasty (PFA)</u>

VI. A patellofemoral knee arthroplasty (PFA) is **medically necessary** when **ALL** the following are met:
   A. BMI is 40 kg/m² or less;
   B. The individual has **one (1)** of the following:
      1. Unsuccessful outcome following a patellofemoral extensor mechanism unloading procedure;
      2. Severe patellofemoral osteoarthritis (Kellgren- Lawrence grade III or IV) limited to a single knee compartment;
      3. Isolated anterior knee pain or patellar pain that has persisted for 3 months or longer and is further exacerbated by functional activities including stairs, inclines, transfers or prolonged sitting;
   C. Pain in the last 12 weeks (or more) has resulted in functional impairment that limits range of motion and interferes with activities of daily living or painful weight-bearing;
   D. Conservative management must include **both** of the following:

1. Physical Therapy (PT) meets **all** the following:
    a. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
    b. Participation for a minimum of 6 weeks during the previous 6 months; **and**
    c. Failure to improve symptoms or functional impairments;
2. Pain management includes **any** of the following:
    a. Non- pharmacologic pain management such as modification of activity/protective weight-bearing/use of an orthotic;
    b. Intra-articular corticosteroid injection; **or**
    c. Medication management (e.g., NSAIDS); **and**

E. Physical examination includes **one (1)** or more of the following:
1. Contracture;
2. Crepitus;
3. Deformity;
4. Joint swelling or effusion;
5. Patellar instability; **or**
6. Restricted range of motion;

F. Weight-bearing radiographs confirm **both** the following:
1. No degenerative changes in the lateral or medial compartments; **and**
2. **either** of the following:
    a. Severe narrowing of the patellofemoral joint space; **or**
    b. Patellofemoral bone-on bone contact confined to a single compartment.

VII. A patellofemoral arthroplasty is **contraindicated** in **ANY** of the following:

A. Active local or systemic infection;
B. Abnormal patellofemoral alignment or tracking;
C. Uncontrolled diabetes mellitus (HbA1c greater than 8%);
D. Uncontrolled hypertension;
E. Inflammatory arthritis;
F. Knee instability related to ligament deficiency;
G. Nicotine or tobacco, including cigar, cigarette, e-cigarette, nicotine pouch, smokeless tobacco or vape pen use in the 6 weeks prior to surgery;

H. Intra-articular corticosteroid injection in the operative joint within 12 weeks of surgery;

I. Meniscectomy, total, in remaining compartment;

J. Clinically unstable or unmanaged comorbid condition(s);

K. Material allergy incompatible with implantation;

L. Untreated or unmanaged substance use disorder;

M. Fixed flexion contracture of 10 degrees or more.

Diagnostic Knee Arthroscopy

VIII. Diagnostic knee arthroscopy is **medically necessary** when documentation supports **ALL** the following:

A. Weight-bearing radiographs do not demonstrate moderate-to-severe osteoarthritic degeneration (Kellgren-Lawrence grade III or IV), including anteroposterior and Rosenberg views when available;

B. Pain in the last 12 weeks (or more) has resulted in functional impairment that limits range of motion and interferes with activities of daily living or painful weight-bearing;

C. Conservative management must include **both** of the following:

1. Physical Therapy (PT) meets **all** the following:

a. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;

b. Participation for a minimum of 6 weeks during the previous 6 months; **and**

c. Failure to improve symptoms or functional impairments;

2. Pain management includes **any** of the following:

a. Non- pharmacologic pain management such as modification of activity/protective weight-bearing/use of an orthotic;

b. Intra-articular corticosteroid injection; **or**

c. Medication management (e.g., NSAIDS);

D. Conventional diagnostic studies have failed to establish a definitive diagnosis, including **both**:

1. Plain radiographs; **and**

2. MRI;

E. Physical examination is consistent with intra-articular knee pathology and includes **one (1)** or more of the following:

1. Joint swelling or effusion;

2. Restricted range of motion; **or**

3. A positive meniscal provocation examination consistent with joint-line tenderness.

Arthroscopic Chondroplasty

IX. Arthroscopic chondroplasty of the knee is **medically necessary** when **ALL** the following are met:

A. Conservative management must include **both** of the following:

1. Physical Therapy (PT) meets **all** the following:

a. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;

b. Participation for a minimum of 6 weeks during the previous 6 months; **and**

c. Failure to improve symptoms or functional impairments;

2. Pain management includes **any** of the following:

a. Non- pharmacologic pain management such as modification of activity/protective weight-bearing/use of an orthotic;

b. Intra-articular corticosteroid injection; **or**

c. Medication management (e.g., NSAIDS);

B. Weight-bearing radiographs conducted within the previous 3 to 6 months demonstrate minimal degenerative joint disease, consistent with Kellgren-Lawrence grade 0 or I;

C. Knee pain that has resulted in functional impairment that interferes with activities of daily living, work-related activities, routine ambulation, participation in athletics, or other age-appropriate activities;

D. The presence of mechanical symptoms consistent with intra-articular knee pathology, including **one (1)** or more of the following during weight bearing activity:

1. Painful clicking or popping;

2. Recurrent catching; **or**

3. True mechanical locking or limitation of joint motion.

Debridement

X. Debridement, with or without chondroplasty, is **medically necessary** when documentation supports **ONE (1)** of the following clinical indications, when associated criteria are met:

A. Arthrofibrosis, when **all** the following are met:

1. Weight-bearing radiographs do not demonstrate moderate-to-severe osteoarthritic changes (Kellgren-Lawrence grade III or IV);

2. Clinical findings are consistent with arthrofibrosis, including pain, stiffness, and restricted range of motion;

3. A physical therapy program (including telehealth-based rehabilitation when appropriate) that is provided by a physical therapist or chiropractor for at least 6 weeks in the past 6 months;

B. Debridement of femoral condyle or tibial plateau articular cartilage when **all** the following are met:
   1. Absence of moderate-to-severe osteoarthritis on weight-bearing radiographs;
   2. Conservative management must include **all** of the following:
      a. Use of an orthotic/brace;
      b. Physical Therapy (PT) meets **all** the following:
         i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
         ii. Participation for a minimum of 6 weeks during the previous 6 months; **and**
         iii. Failure to improve symptoms or functional impairments;
      c. Pain management includes **any** of the following:
         iv. Intra-articular corticosteroid injection; **or**
         v. Medication management (e.g., NSAIDS);
   3. Recurrent joint effusions (**two [2]** or more episodes);
   4. MRI findings demonstrating an unstable chondral lesion within the previous 3 to 6 months;
   5. Knee pain that has resulted in functional impairment;

C. Patellofemoral chondrosis when **all** the following are met:
   1. No evidence of an alternative pain generator, including:
      a. Referred pain;
      b. Bursitis;
      c. Radicular pain; **or**
      d. Tendinopathy;
   2. Weight-bearing radiographs do not demonstrate moderate-to-severe osteoarthritis (Kellgren-Lawrence grade III or IV);
   3. Conservative management must include **all** of the following:
      a. Use of an orthotic/brace;
      b. Physical Therapy (PT) meets **all** the following:
         i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;

ii. Participation for a minimum of 6 weeks during the previous 6 months; **and**
iii. Failure to improve symptoms or functional impairments;

c. Pain management includes **any** of the following:
i. Intra-articular corticosteroid injection; **or**
ii. Medication management (e.g., NSAIDS);

D. Anterior knee pain localized to the patellofemoral compartment;
E. Functional limitation attributable to the patellofemoral symptoms;
F. Osteochondritis Dissecans (Pediatric Population), when **all** the following are met:
1. At least **two (2)** of the following are present:
a. Restricted range of motion;
b. Limping;
c. Locking or catching symptoms;
d. Joint pain, particularly during or after activity;
e. Joint swelling; **or**
f. Localized tenderness;
2. Imaging conducted within the previous 3 to 6 months includes **both** radiographs and MRI;
3. Conservative management must include **all** of the following:
a. Use of an orthotic/brace;
b. Physical Therapy (PT) meets **all** the following:
i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
ii. Participation for a minimum of 6 weeks during the previous 6 months; **and**
iii. Failure to improve symptoms or functional impairments;
4. Presence of at least **one (1)** of the following factors associated with failure of nonoperative management:
a. Lesion size greater than 150 mm^2;
b. Lesion extending into shoulders or talus;
c. Limited remaining skeletal growth potential; **or**
d. Unstable or detached osteochondral lesion.

<u>Removal of a Loose or Foreign Body</u>

XI. Arthroscopic or open removal of an intra-articular loose body or foreign body of the knee is **medically necessary** when **ALL** the following are met:
   A. Symptoms are present and include:
      1. Pain, with **one (1)** or more of the following:
         a. Buckling during weight-bearing activities;
         b. Instability or weakness; **or**
         c. Mechanical symptoms including clicking, popping, catching, or locking;
   B. Imaging requirements are met:
      1. Knee radiographs obtained within the previous 3 to 6 months; **or**
      2. MRI obtained within the previous 3 to 6 months;
   C. **any** of the following indications are present:
      1. Intra-articular loose body;
      2. Foreign body within the knee joint; **or**
      3. Impinging osteophyte contributing to symptoms.

Synovectomy and/or Synovial Biopsy

XII. Synovectomy or synovial biopsy is **medically necessary** when documentation supports **ONE (1)** of the following clinical indications:
   A. Hemarthrosis, when **both** of the following are met:
      1. Associated with trauma, coagulation disorder, or bleeding disorder; **and**
      2. Diagnosis confirmed by physical examination, joint aspiration, MRI, or a combination of these;
   B. Symptomatic Synovial Plica, when **all** the following are met:
      1. Examination and MRI findings support the diagnosis of plica;
      2. Conservative management must include **both** of the following:
         a. Physical Therapy (PT) meets **all** the following:
            i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
            ii. Participation for a minimum of 6 weeks during the previous 6 months; **and**
            iii. Failure to improve symptoms or functional impairments;
         b. Pain management includes **any** of the following:
            i. Activity modification, protected weight-bearing, brace, or orthotic use;
            ii. Intra-articular corticosteroid injection; **or**

iii. Pharmacologic treatment (e.g., NSAIDS or analgesics);

3. Joint aspiration or corticosteroid injection has been performed when clinically appropriate;

C. Proliferative Synovial Disease, when **all** the following are met:
1. Condition includes **one (1)** or more of the following:
a. Pigmented villonodular synovitis (PVNS);
b. Synovial chondromatosis;
c. Sarcoid synovitis;
d. Traumatic hypertrophic synovitis; **or**
e. Similar proliferative synovial disorder;
2. Diagnosis is confirmed by biopsy, MRI, clinical history, or a combination of these;
3. Conservative management must include **both** of the following:
a. Physical Therapy (PT) meets **all** the following:
i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
ii. Participation for a minimum of 6 weeks during the previous 6 months; **and**
iii. Failure to improve symptoms or functional impairments;
b. Pain management includes **any** of the following:
i. Activity modification, protected weight-bearing, brace, or orthotic use;
ii. Intra-articular corticosteroid injection; **or**
iii. Pharmacologic treatment (e.g., NSAIDS or analgesics);

D. Rheumatoid Synovitis, when **all** the following are met:
1. Rheumatoid arthritis with symptomatic synovial involvement;
2. Conservative management must include **both** of the following:
a. Physical Therapy (PT) meets **all** the following:
i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
ii. Participation for a minimum of 6 weeks during the previous 6 months; **and**
iii. Failure to improve symptoms or functional impairments;
b. Pain management includes **any** of the following:
i. Activity modification, protected weight-bearing, brace, or orthotic use;
ii. Intra-articular corticosteroid injection; **or**

iii. Pharmacologic management (e.g., NSAIDS or analgesics);

3. Disease remains refractory following at least 6 months of disease-modifying antirheumatic drug (DMARD) therapy.

XIII. Arthroscopic Knee Procedures are **contraindicated** when an intra-articular corticosteroid injection has been administered within 4 weeks of the planned arthroscopic procedure.

Knee Ligament Reconstruction and/or Repair- Pediatric/Skeletally Immature

XIV. Anterior cruciate ligament (ACL) reconstruction is **medically necessary** in skeletally immature individuals when **ALL** the following are met:

A. At least **two (2)** of the following are present:
   1. Audible pop at the time of injury;
   2. Difficulty achieving full knee extension;
   3. Instability during cutting, pivoting, jumping, or athletic activities;
   4. Localized joint tenderness;
   5. Pain with weight-bearing activities;
   6. Quadriceps muscle atrophy;
   7. Reduced range of motion;
   8. Swelling occurring within 6 to 8 hours following injury;
B. Knee radiographs obtained within the previous 3 to 6 months;
C. MRI obtained within the previous 3 to 6 months;
D. **Either** of the following indications are present:
   1. Complete ACL tear associated with significant instability; **or**
   2. Partial ACL tear with ongoing instability despite a structured rehabilitation program

Knee Ligament Reconstruction and/or Repair- Adult

XV. Anterior cruciate ligament (ACL) reconstruction is **medically necessary** when **ALL** the following criteria are met:

A. Conservative management must include **all** of the following:
   1. Use of an orthotic/brace;
   2. Physical Therapy (PT) meets **all** the following:
      a. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
      b. Participation for a minimum of 6 weeks during the previous 6 months;
      c. Includes attempts at full-joint extension; **and**

d. Failure to improve symptoms or functional impairments;

3. Pain management includes **any** of the following:
   a. Intra-articular corticosteroid injection; **or**
   b. Medication management (e.g., NSAIDS);

B. **All** age-specific criteria must be met:

1. Individuals aged 18-25 years must meet **all** the following criteria:
   a. Weight-bearing radiographs do not demonstrate advanced degenerative joint disease (Kellgren-Lawrence grade III or IV);
   b. Symptomatic functional instability symptoms;
   c. ACL rupture confirmed by **all** the following:
      i. MRI performed within the previous 6 to 12 months;
      ii. Physical examination demonstrates objective anterior instability, including **one (1)** or more of the following:
         a) Positive anterior drawer test with increased anterior tibial translation compared with the uninvolved knee;
         b) Positive Lachman examination with increased tibial translation and a diminished, soft, or absent endpoint; **or**
         c) Positive pivot-shift examination;
      iii. Physical Therapy* for range of motion requirements are met, including **either** of the following:
         a) Physical therapy is NOT required for individuals with full range of motion defined as having **any** of the following:
            1) Extension to 0 degrees;
            2) Flexion ≥ 130 degrees;
            3) Symmetry to the contralateral limb; **or**
         b) Physical therapy* is required for individuals with restricted range of motion defined as having **any** of the following:
            1) Loss of full extension;
            2) Measurable side-to-side ROM asymmetry;
            3) Pain-limited range of motion affecting functional activities;
            4) Reduced flexion;

*A physical therapy program (including telehealth-based rehabilitation when

appropriate) must be provided by a physical therapist or chiropractor for at least 6 weeks in the past 6 months and must attempt a full-joint extension.

OR

2. Individuals aged 26-40 years must meet **all** the following criteria:
    a. Weight-bearing radiographs do not demonstrate advanced degenerative joint disease (Kellgren-Lawrence grade III or IV);
    b. The individual reports symptomatic instability resulting in recurrent giving-way episodes, pivoting limitations, safety concerns, or impairment of daily activities, occupational demands, athletic participation, or other desired functional activities;
    c. ACL rupture confirmed by **all** the following:
        i. MRI performed within the previous 6 to 12 months;
        ii. Physical examination demonstrates objective anterior instability, including **one (1)** or more of the following:
            a) Positive anterior drawer test with increased anterior tibial translation compared with the uninvolved knee;
            b) Positive Lachman examination with increased tibial translation and a diminished, soft, or absent endpoint; **or**
            c) Positive pivot-shift examination;

OR

3. Individuals 40 years of age or greater must meet **all** the following criteria:
    a. Weight-bearing radiographs do not demonstrate advanced degenerative joint disease (Kellgren-Lawrence grade III or IV);
    b. The individual reports symptomatic instability resulting in recurrent giving-way episodes, pivoting limitations, safety concerns, or impairment of daily activities, occupational demands, athletic participation, or other desired functional activities;
    c. ACL rupture confirmed by MRI within the last 6 to 12 months.

<u>Multiple Ligament Reconstruction</u>

XVI. Reconstruction or repair of multiple knee ligaments is **medically necessary** when **BOTH** the following are met:
    A. The presence of at least **two (2)** of the following:
        1. Weight-bearing difficulty or the need for protective bracing due to pain or instability;
        2. Functional impairment affecting activities of daily living, occupational activities, **or** athletic participation;

3. Instability, including recurrent giving-way, buckling, or rotational instability;
4. Localized joint-line tenderness or pain consistent with ligamentous or meniscal injury;
5. Symptoms such as catching, locking, or painful clicking; or
6. Joint swelling or effusion following the injury; **and**

B. Documentation confirms injury involving **two or more** major stabilizing ligaments of the knee, as demonstrated by **either** of the following:

1. MRI; **or**
2. Physical examination is consistent with multiligamentous* instability.

*Multiligament knee injuries do not require prior conservative management, as these injuries are characteristically unstable and are unlikely to be adequately managed with physical therapy, bracing, or other nonoperative treatments alone.

Posterior Cruciate Ligament (PCL) Reconstruction

XVII. Posterior cruciate ligament (PCL) reconstruction is **medically necessary** when **ALL** the following are met:

A. Weight-bearing radiographs do not demonstrate moderate-to-severe osteoarthritis (Kellgren-Lawrence grade III or IV);

B. MRI obtained within the previous 3 to 6 months demonstrates a near-complete or complete PCL tear;

C. Reported knee instability, weakness, or episodes of giving-way;

D. Objective physical examination is consistent with PCL insufficiency, including **any** of the following:

1. Positive posterior drawer examination;
2. Reverse pivot-shift test;
3. Positive quadriceps active test;
4. Posterior sag sign; **or**
5. Tibial drop-back sign;
6. Conservative management must include **all** of the following:
   a. Physical Therapy (PT) meets **all** the following:
      i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
      ii. Participation for a minimum of 6 weeks during the previous 6 months; **and**
      iii. Failure to improve symptoms or functional impairments;
   b. Pain management includes **any** of the following:

i. Nonpharmacologic management including activity modification, protected weight-bearing, brace, or orthotic use; **or**

ii. Medication management (e.g., NSAIDS or analgesics);

Lateral Collateral Ligament (LCL) or Medial Collateral Ligament (MCL) Repair/Reconstruction

Isolated repair or reconstruction of the lateral collateral ligament (LCL) or medial collateral ligament (MCL) is uncommon and is generally performed in conjunction with treatment of additional ligamentous injuries.

Requests for collateral ligament repair or reconstruction in the absence of an acute traumatic injury will be assessed individually based on the clinical circumstances.

Arthroscopic Meniscectomy or Meniscal Repair

XVIII. Arthroscopic meniscectomy is **medically necessary** when **ALL** the following are met:

A. Weight-bearing radiographs do not demonstrate advanced osteoarthritis (Kellgren-Lawrence grade IV);

B. **One (1)** of the following clinical scenarios is present:

1. Individual is younger than 18 years of age;
    a. MRI confirms a meniscal tear; and
    b. Physical examination is consistent with meniscal pathology;

C. Repairable tear pattern, when **all** the following are met:

1. MRI demonstrates **any** of the following:
    a. Meniscal root tear;
    b. Peripheral tear involving the vascular zone; **or**
    c. Other repairable meniscal tear;
2. Pain localizes to the involved compartment on physical examination;
3. Bucket-handle tear, when **all** the following are met:
    a. MRI confirms a bucket-handle meniscal tear;
    b. Acute traumatic injury with a locked knee; **and**
    c. Examination demonstrates meniscal findings or loss of terminal extension;
4. Symptomatic meniscal tear after unsuccessful conservative management:
    a. Physical examination is consistent with a meniscal tear;
    b. Clinical findings include **ONE (1)** or more:
        i. Joint-line pain with forced hyperextension;

ii. Joint-line pain with maximal flexion; or

iii. Catching or locking symptoms;

D. Conservative management must include **all** of the following:

a. Physical Therapy (PT) meets **all** the following:

i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;

ii. Participation for a minimum of 6 weeks during the previous 6 months; **and**

iii. Failure to improve symptoms or functional impairments;

b. Pain management includes **any** of the following:

i. Nonpharmacologic management including activity modification, protected weight-bearing, brace, or orthotic use; **or**

ii. Intra-articular corticosteroid injection;

iii. Medication management (e.g., NSAIDS or analgesics); **and**

E. Imaging performed within the previous 3 to 6 months demonstrates **either:**

1. Mild, minimal, or no arthritic change on weight-bearing radiographs; **or**

2. MRI-confirmed meniscal tear with mild or absent degenerative findings and **all** the following:

a. No full-thickness cartilage loss;

b. No moderate or severe cartilage thinning;

c. No meniscal extrusion;

d. No greater than mild osteophyte formation; **and**

e. No subchondral cystic change or bone edema.

XIX. Arthroscopic meniscal repair is **medically necessary** when **ALL** the following are met:

A. Weight-bearing radiographs do not demonstrate advanced osteoarthritis (Kellgren-Lawrence grade III or IV);

B. **All** age-based criteria are met:

1. Individual younger than eighteen (18) years:

a. MRI demonstrates a meniscal tear with physical examination supporting meniscal pathology; including **any** of the following:

i. Meniscal root tear;

ii. Peripheral tear involving the vascular zone;

iii. Other repairable meniscal tear and compartment-specific pain is present on

examination; **or**

2. Individual is 19-40 years:
    a. Examination demonstrates **one (1)** or more:
        i. Joint-line pain with hyperextension;
        ii. Joint-line pain with maximal flexion;
        iii. Catching or locking symptoms;
    b. Imaging performed within the previous 3 to 6 months demonstrates **either:**
        i. Mild, minimal, or no arthritic change on weight-bearing radiographs; **or**
        ii. MRI-confirmed meniscal tear with mild or absent degenerative findings and **all** the following:
            a) No full-thickness cartilage loss;
            b) No moderate or severe cartilage thinning;
            c) No meniscal extrusion;
            d) No greater than mild osteophyte formation;
            e) No subchondral cystic change or bone edema; **or**
3. Individual is 41 years of age or older:
    a. Examination demonstrates **one (1)** or more:
        i. Joint-line pain with hyperextension;
        ii. Joint-line pain with maximal flexion; **or**
        iii. Catching or locking symptoms;
    b. Imaging requirements outlined above are satisfied;
    c. Conservative management meets **either** of the following:
        i. Conservative management is not required when **any** of the following is documented:
            a) Acute traumatic unstable meniscal tear with mechanical symptoms;
            b) Displaced bucket-handle tear;
            c) Extension block or inability to fully extend the knee;
            d) Obstructing meniscal fragment producing loss of motion;
            e) True mechanical locking of the knee; **or**
        ii. For all other indications, conservative management must include **all** of the following:

a) Physical Therapy (PT) meets **all** the following:
   1) Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
   2) Participation for a minimum of 6 weeks during the previous 6 months;
   3) Failure to improve symptoms or functional impairments; **and**

b) Pain management includes **any** of the following:
   1) Nonpharmacologic management including activity modification, protected weight-bearing, brace, or orthotic use; **or**
   2) Intra-articular corticosteroid injection;
   3) Medication management (e.g., NSAIDS or analgesics).

XX. Arthroscopic meniscectomy or meniscal repair is **contraindicated** when **ANY** of the following are present:
   A. Intra-articular corticosteroid injection administered within four weeks prior to the planned procedure;
   B. Advanced osteoarthritis including **either**:
      1. Kellgren-Lawrence grade IV osteoarthritis when meniscectomy is requested; **or**
      2. Kellgren-Lawrence grade III or IV osteoarthritis when meniscal repair is requested;
   C. Degenerative, non-traumatic meniscal pathology when partial meniscectomy is proposed.

<u>Meniscal Allograft Transplantation</u>

XXI. Meniscal allograft transplantation is **medically necessary** when **ALL** the following are met:
   A. BMI is less than 40kg/m²;
   B. Individual is less than 40 years of age and is skeletally mature;
   C. Weight-bearing radiographs do not demonstrate **either** of the following:
      1. Moderate-to-severe articular degeneration corresponding to Modified Outerbridge grade III or IV; **or**
      2. Moderate-to-severe osteoarthritis (Kellgren-Lawrence grade III or IV);
   D. Lower extremity alignment demonstrates no significant varus or valgus deformity;
   E. Conservative management must include **all** of the following:
      1. Non-steroidal anti-inflammatory drugs (NSAIDS) or analgesics;
      2. Physical Therapy (PT) meets **all** the following:
         a. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
         b. Participation for a minimum of 6 weeks during the previous 6 months; **and**

c. Failure to improve symptoms or functional impairments;

3. Pain management includes **at least one (1)** of the following:

a. Nonpharmacologic management including activity modification, protected weight-bearing, brace, or orthotic use; **or**

b. Intra-articular corticosteroid injection;

F. Ligamentous stability has been established before transplantation or will be addressed concurrently;

G. MRI demonstrates a meniscal-deficient compartment or prior diagnostic evaluation confirms subtotal or total meniscectomy.

XXII. Meniscal Allograft Transplantation is **not medically necessary** for **ANY** of the following:

A. Intra-articular corticosteroid injection within 4 weeks of the proposed procedure; or

B. **Any** of the following conditions, which have not been corrected, either before or in conjunction with the planned procedure:

1. Full-thickness articular cartilage defects, including advanced focal chondral lesions (e.g., International Cartilage Repair Society Grade III or IV or Outerbridge Grade IV);

2. Ligamentous insufficiency resulting in joint instability;

3. Coronal plane malalignment greater than 5 degrees of varus or valgus; **or**

4. Severe osteoarthritis (Kellgren-Lawrence grade IV).

<u>Patellar Realignment</u>

XXIII. Patellar realignment is **medically necessary** when documentation supports **ONE (1)** of the following:

A. Symptomatic patellar maltracking or malalignment and **all** the following:

1. Imaging demonstrates abnormal patellofemoral alignment or patellar maltracking;

2. Imaging does not identify an associated fracture or intra-articular loose body;

3. Physical examination demonstrates **both**:

a. Patellofemoral pain; **and**

b. Patellar instability findings, including apprehension or a positive J-sign;

B. Conservative management must include **all** of the following:

1. Physical Therapy (PT) meets all the following:

a. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;

b. Participation for a minimum of 3 months during the previous 6 months; **and**

c. Failure to improve symptoms or functional impairments;

2. Pain management includes **at least one (1)** of the following:

a. Nonpharmacologic management including activity modification, protected weight-bearing, brace, or orthotic use;

b. Intra-articular corticosteroid injection; **or**

c. Medication management (e.g., NSAIDS or analgesics);

C. Recurrent patellar instability and **both** of the following:

1. **Two (2)** or more documented patellar dislocations or subluxation events; **and**

2. **Either** of the following are met:

a. Imaging demonstrates medial patellofemoral ligament insufficiency; **or**

b. Physical examination confirms patellar instability with a positive apprehension test;

D. Acute traumatic patellar dislocation with associated structural injury demonstrated on imaging, including **one (1)** or more of the following:

1. Intra-articular fracture;

2. Osteochondral fracture; **or**

3. Loose body.

XXIV. Lateral retinacular release is **medically necessary** for **EITHER** of the following:

A. Diagnostic imaging demonstrates confirms patellar tilt and physical examination identifies isolated patellofemoral pain that is reproduced with patellar tilt testing; **or**

B. Symptomatic lateral patellofemoral cartilage pathology and **all** the following are met:

1. Weight-bearing radiographs show no evidence of moderate-to-severe osteoarthritis (Kellgren-Lawrence grade III or IV);

2. Imaging findings or intraoperative assessment confirm a cartilage lesion involving the lateral trochlear surface of the femur or the lateral patellar facet;

3. Conservative management must include **all** of the following:

a. Physical Therapy (PT) meets **all** the following:

i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;

ii. Participation for a minimum of 6 weeks during the previous 6 months; **and**

iii. Failure to improve symptoms or functional impairments; and

b. Pain management includes **at least one (1)** of the following:

i. Nonpharmacologic management including activity modification, protected

weight-bearing, brace, or orthotic use;

ii. Intra-articular corticosteroid injection; **or**

iii. Medication management (e.g., NSAIDS or analgesics).

Knee Lysis of Adhesions

XXV. Knee arthroscopy with lysis of adhesions is **medically necessary** when **EITHER** of the following is met:

A. Post-surgical stiffness following ligament reconstruction or knee joint reconstruction, and **all** the following:

1. At least 12 weeks have elapsed since the prior procedure;
2. Physical examination demonstrates **either**:
   a. Knee flexion is less than 105 degrees; **or**
   b. Flexion contracture greater than 10 degrees;
3. A physical therapy program (including telehealth-based rehabilitation when appropriate) provided by a physical therapist or chiropractor has been completed for at least 6 weeks within the 6 months without meaningful improvement in symptoms or function'

B. Arthrofibrosis associated with prior knee trauma or resolved knee infection, and **both** of the following:

1. At least 12 weeks have passed since the traumatic event or resolution of infection; **and**
2. Manipulation under anesthesia is planned in conjunction with the lysis of adhesions procedure.

Manipulation Under Anesthesia (MUA)

XXVI. Manipulation under anesthesia of the knee is **medically necessary** when **ALL** the following criteria are met:

A. Conservative management must include **all** of the following:

1. Physical Therapy (PT) meets **all** the following:
   a. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
   b. Participation for a minimum of 6 weeks during the previous 6 months;
   c. Failure to improve symptoms or functional impairments; **and**
2. Pain management includes **at least ONE (1)** of the following:
   a. Nonpharmacologic management including activity modification, protected weight-bearing, brace, or orthotic use;
   b. Medication management (e.g.,NSAIDS) or analgesics; **and**

B. Diagnostic evaluation performed within the previous 3 to 6 months includes **both** the following:
   1. Computed tomography (CT) imaging;
   2. Knee radiographs confirming **both**:
      a. Intact surgical hardware when present; **and**
      b. Absence of a mechanical cause for restricted motion (e.g., component malposition or fracture); **and**

C. Clinical findings demonstrate **all** the following:
   1. Flexion contracture greater than ten (10) degrees;
   2. Knee flexion less than 90 degrees; **and**
   3. Pain and stiffness has resulted in functional impairment and interferes with activities of daily living.

Restorative Cartilage Procedures of the Knee

Restorative cartilage procedures include osteochondral autograft transfer, osteochondral allograft transplantation, autologous chondrocyte implantation, mosaicplasty, microfracture, abrasion arthroplasty, subchondral drilling, or similar cartilage restoration techniques.

XXVII. Restorative cartilage procedures are **medically necessary** when documentation supports **EITHER** of the following:

A. Focal Chondral or Osteochondral Defect, when **all** the following are met:
   1. Weight-bearing radiographs do not demonstrate moderate-to-severe osteoarthritis (Kellgren-Lawrence grade III or IV);
   2. Individual is skeletally mature and younger than 50 years of age; requests for older individuals may be considered when activity demands and clinical circumstances support intervention;
   3. Conservative management must include **all** of the following:
      a. Physical Therapy (PT) meets **all** the following:
         iv. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
         v. Participation for a minimum of 6 weeks during the previous 6 months;
         vi. Failure to improve symptoms or functional impairments; **and**
      b. Pain management includes **at least one (1)** of the following:
         vii. Nonpharmacologic management including activity modification, protected weight-bearing, brace, or orthotic use;
         viii. Intra-articular corticosteroid injection; **or**

ix. Medication management (e.g., NSAIDS or analgesics); **and**

4. MRI confirms **one (1)** of the following:
   a. Full-thickness weight-bearing cartilage lesion measuring less than 2.5 cm^2;
   b. Single full-thickness grade III or IV Outerbridge lesion measuring between 1.0 cm^2 and 2.0 cm^2 and involving only one articular surface; **or**
   c. Full-thickness chondral or osteochondral lesion involving the femoral condyle or trochlea measuring less than 2.5 cm^2;
5. Localized knee pain has been present for at least 6 months and results in significant functional limitation;
6. Physical examination demonstrates restricted range of motion and/or mechanical symptoms including clicking, popping, catching, or locking;
7. Physical examination or imaging confirms **both**:
   a. ligamentous stability; **and**
   b. Intact meniscal integrity;

B. Patellofemoral Chondrosis, when **all** the following are met:
1. Examination demonstrates pain localized to the patellofemoral compartment;
2. Imaging demonstrates patellofemoral chondrosis classified as Outerbridge grade III or IV;
3. Weight-bearing radiographs do not demonstrate moderate-to-severe osteoarthritis (Kellgren-Lawrence grade III or IV);
4. Anterior knee pain results in functional impairment that interferes with activities of daily living;
5. Symptoms correlate with the documented patellofemoral chondral abnormality;
6. Conservative management must include **all** of the following:
   a. Physical Therapy (PT) meets **all** the following:
      i. Supervised by a licensed PT, chiropractor, or through tele-rehab PT;
      ii. Participation for a minimum of 6 weeks during the previous 6 months;
      iii. Failure to improve symptoms or functional impairments; **and**
   b. Pain management includes **at least ONE (1)** of the following:
      i. Nonpharmacologic management including activity modification, protected weight-bearing, brace, or orthotic use;
      ii. Intra-articular corticosteroid injection; **or**

iii. Medication management (e.g., NSAIDS or analgesics).

RELATED POLICIES

Not Applicable

POLICY GUIDELINE(S)

Not Applicable

DESCRIPTION

Several factors increase the risk of developing knee osteoarthritis, including advanced age, increased body weight, bone density abnormalities, meniscal derangement, sex, and prior trauma. Individuals with knee osteoarthritis commonly experience pain and functional limitations that may interfere with ambulation, activities of daily living, or the ability to work. Imaging may demonstrate the severity of disease through findings such as joint space narrowing, osteophyte formation, subchondral sclerosis, or exposed bone.

The Kellgren-Lawrence Grading System is a radiographic grading system that has been developed for describing osteoarthritic changes to the knee. When used, the radiographic findings are typically reported within one of the following categories:

- Grade 0 – No radiographic features of osteoarthritis are present;
- Grade I – Doubtful narrowing of joint space and possible osteophytic lipping;
- Grade II – Definite osteophytes and possible narrowing of joint space;
- Grade III – Moderate multiple osteophytes, definite narrowing of joint space, some sclerosis, and possible deformity of bone contour;
- Grade IV – Large osteophytes, marked narrowing of joint space, severe sclerosis, and definite deformity of bone contour.

Modified Outerbridge Classification is a system that has been developed for judging articular cartilage injury to the knee. This system allows delineation of varying areas of chondral pathology, based on the qualitative appearance of the cartilage surface as viewed on MRI, and can assist in identifying those injuries that are suitable for repair techniques. The characterization of cartilage in this system is as follows:

- Grade I – softening with swelling;
- Grade II – fragmentation and fissuring less than one square centimeter (1 cm2);
- Grade III – fragmentation and fissuring greater than one square centimeter (1 cm2);
- Grade IV – subchondral bone exposed.

Initial management typically consists of conservative treatment, which may include physical therapy,

exercise, weight loss, nonsteroidal anti-inflammatory medications, and intra-articular injections. These treatments are generally attempted before surgical intervention is considered, except in circumstances such as significant trauma where conservative treatment would not be expected to provide meaningful benefit.

Knee arthroplasty, also known as knee replacement, is a commonly performed orthopedic procedure in which damaged portions of the knee joint are resurfaced and replaced with prosthetic components made of materials such as metal, plastic, or ceramic. The procedure is most commonly performed for advanced osteoarthritis but may also be indicated for inflammatory arthritis or osteonecrosis with secondary arthritis when symptoms and functional impairment warrant surgical intervention. Potential complications of knee arthroplasty include infection, pulmonary embolism, deep vein thrombosis, nerve injury, and the need for subsequent revision surgery.

Arthroscopy and Associated Procedures

Damage to the articular cartilage or menisci of the knee may develop over time or result from an acute injury. Individuals with these conditions may experience pain, swelling, catching, or locking, which can limit the ability to fully extend the knee and interfere with activities of daily living.

When surgical treatment is indicated, knee arthroscopy is a minimally invasive procedure that may be performed to evaluate and treat the affected structures. During the procedure, the surgeon makes small incisions and inserts a fiber-optic camera through one incision and surgical instruments through another to repair or remove torn or frayed tissue or loose fragments.

Because arthroscopic surgery is not without risk, conservative treatment is generally recommended as first-line therapy and may include supervised physical therapy, activity modification, nonsteroidal anti-inflammatory drugs (NSAIDs) or other analgesics for pain management, and intra-articular injections. Recommended durations of conservative therapy vary among published sources, generally ranging from four to 12 weeks depending on the specific procedure and clinical indication. Arthroscopy most commonly involves debridement and meniscectomy, though chondroplasty, loose body removal, and ligament reconstruction are also performed.

Ligament Reconstruction and Repair

The knee has four main cruciate ligament complexes that respond to the loads and forces placed upon them by body weight, ground reaction, and external trauma. The anterior cruciate ligament (ACL), medial collateral ligament (MCL), posterior cruciate ligament (PCL) and posterolateral corner (PLC). The ACL and PCL help with anteroposterior stability, which resists the forward and backward displacement of the tibia. The MCL is the primary restraint against valgus rotation ("knock-kneed" alignment), and the PLC is a complex of ligaments that resists varus ("bow-legged" alignment). Injuries involving multiple ligaments do not require prior conservative management.

Meniscal procedures

The meniscus is a set (one medial, one lateral) of fibrocartilage pads that help to distribute and absorb the loads and forces placed upon the knee, while reducing contact stress on the articular cartilage, additionally stabilizing the joint. Conservative treatment is preferred over surgery in the

setting of most meniscal tears. Partial meniscectomy is the removal of torn pieces of mensicus related to non-traumatic pathology. Partial arthroscopic meniscectomy has been associated with future osteoarthritis risk and high rates of knee replacement.

Patellofemoral Realignment Procedures

The patella (kneecap) normally rides up and down within a shallow groove at the end of the thigh bone. Several things can disrupt this smooth tracking:

- The patella is pulled too far to one side.
- The patella sits too high in the groove.
- The groove itself is too flat or shallow.

When tracking is disrupted, the kneecap can rub, cause pain, or dislocate, and the cartilage behind the kneecap can wear down, adding to the pain.

Realignment procedures are designed to correct whichever problem is present, tightening or reconstructing the ligaments that hold the kneecap in place, reshaping a groove that is too flat, or relocating the bony bump (tubercle) just below the kneecap to change its pull. Malalignment is confirmed by imaging. A lateral retinacular release is a procedure to divide tissue on the lateral side of the patella to relieve excessive lateral tilt and pressure. These operations are considered for symptomatic individuals only after physical therapy, bracing, and other conservative treatments have failed.

After surgery, trauma, infection, or prolonged immobilization, the knee can develop adhesions-arthrofibrosis, that mechanically limits motion. When conservative management such as physical therapy and bracing fails to restore adequate function and near-full extension, surgery is considered.

Surgeons arthroscopically release and remove these adhesions using shavers, radiofrequency or ablation devices, and cutting tools. Manipulation of the joint under anesthesia commonly follows the release to further improve range of motion, particularly flexion.

Restorative Cartilage procedures

Osteochondral autografting and allografting are used for full-thickness cartilage defects of weight-bearing surfaces caused by trauma or by conditions such as osteochondritis dissecans. The goal is to restore the cartilage surface along with its supporting bone, improving joint function and reducing pain. The surgeon harvests one or more plugs of cartilage and bone from the patient's own non-/less-weight-bearing surfaces (autograft) or from a donor joint (fresh or cryopreserved allograft). The base of the defect is abraded or curetted down to subchondral bone, and the graft is press-fit into place.

Mosaicplasty (osteochondral autograft transfer, or OATS) harvests cylindrical bone-cartilage plugs from the patient's own knee and transplants them into a focal defect. After the lesion is excised and the base refreshed, grafts are taken from low-weight-bearing areas such as the intercondylar notch or trochlear margins, and a recipient tunnel is created and sized. The plug is seated by press-fit; when several are used, they are arranged side by side in a mosaic pattern to resurface the area.

Autograft is best suited to smaller lesions (generally <2–4 cm²) because of limited donor tissue.

Osteochondral allograft transplantation (OCA) is conceptually similar but uses donor (cadaver) tissue, often as a single larger plug that fills the entire defect. Because there is no donor-site limitation, OCA is favored for larger lesions (>2 cm²). For optimal cartilage restoration, any associated instability (e.g., ligament deficiency), malalignment, or meniscal loss should be corrected at the same time.

Autologous chondrocyte implantation (ACI) treats deep, larger (typically >2–4 cm²) full-thickness defects in two stages: cartilage cells (chondrocytes) are first harvested arthroscopically and expanded in culture, then implanted into the defect at a second operation, where they regenerate a cartilage-like surface. ACI is generally reserved for larger lesions in higher-demand patients.

These restoration techniques are reserved for symptomatic, skeletally mature patients with imaging-confirmed focal chondral or osteochondral defects and maintained (or concurrently restored) ligament stability, including those with patellofemoral chondrosis.

SUPPORTIVE LITERATURE

Knee Arthroplasty

Total knee arthroplasty (TKA) is an effective surgical treatment for appropriately selected patients with symptomatic moderate-to-severe knee osteoarthritis. Randomized controlled evidence has demonstrated greater improvements in pain and physical function following TKA combined with nonsurgical treatment compared with comprehensive nonsurgical treatment alone, with benefits evaluated through two years of follow-up (Skou et al., 2015, 2017).

Knee Arthroscopy and Associated Procedures

A 2019 Cochrane systematic review by Palmer et al. evaluated the benefits and harms of surgical interventions for symptomatic mild-to-moderate knee osteoarthritis. The review included individuals with knee pain and imaging evidence of Kellgren-Lawrence grade 1, 2, or 3 osteoarthritis. Outcomes assessed included pain, function, radiographic progression, quality of life (QOL), short-term serious adverse events, reoperation rates, and withdrawals due to adverse events.

Five randomized controlled trials involving 566 participants compared surgical with non-surgical interventions. One U.S. study involving 320 participants compared arthroscopic partial meniscectomy (APM) followed by physical therapy, consisting of home-based exercises, with physical therapy (PT) alone. This was the primary comparison reported in the review. A second U.S. study involving 32 participants compared arthroscopic surgery, including debridement with or without synovectomy or chondroplasty, with closed-needle joint lavage using saline. Two studies involving 152 participants, including 120 from Pakistan and 32 from the United Kingdom, compared arthroscopic surgery, consisting of washout with or without debridement, with hyaluronic acid injection. One study involving 62 participants from the Netherlands compared high tibial osteotomy with knee joint distraction surgery. Compared with non-surgical treatment, surgery was associated with a 0.2% reduction in pain, a 0.8% improvement in function, and a 1% increase in serious adverse events. Five participants in the surgical group subsequently underwent total knee replacement. Progression of osteoarthritis and quality of life were not measured. The quality of evidence was rated as low

because of limitations in study design and small sample sizes. The authors concluded that there may be little difference between APM and a home exercise program for the treatment of mild-to-moderate knee osteoarthritis.

A second Cochrane systematic review, published by O'Connor et al. in 2022, evaluated the benefits and harms of arthroscopic surgery compared with placebo surgery or non-surgical treatment for degenerative knee disease, including osteoarthritis and degenerative meniscal tears. Sixteen randomized or quasi-randomized controlled trials met the inclusion criteria. Four trials involving 380 participants compared arthroscopic surgery with placebo surgery. In the remaining trials, arthroscopic surgery was compared with exercise (eight trials; 1,371 participants), a single intra-articular glucocorticoid injection (one trial; 120 participants), non-arthroscopic lavage (one trial; 34 participants), nonsteroidal anti-inflammatory drugs (one trial; 80 participants), or weekly hyaluronic acid injections for five weeks (one trial; 120 participants).

Most trials without a placebo control were susceptible to bias, including selection bias (56%), performance bias (75%), detection bias (75%), attrition bias (44%), and selective reporting bias (75%). The placebo-controlled trials were less susceptible to bias, with none considered at risk for performance or detection bias. The primary findings focused on the comparison between arthroscopic and placebo surgery. At three months, participants who underwent arthroscopic surgery had improvements of 4.6 points in pain, 0.1 points in knee function, and 5.6 points in quality of life compared with placebo surgery, based on 0-to-100-point scales. At five years, 8% more participants who underwent arthroscopic surgery rated their treatment as successful compared with those who underwent placebo surgery. Serious adverse events were 2% more frequent among participants who underwent arthroscopic surgery. The authors concluded that knee arthroscopy does not provide clinically important benefits in pain or function for degenerative knee disease. However, the certainty of evidence for some outcomes was limited by heterogeneity among trials and the small number of events.

Ligament Reconstruction and Repair

Evidence supporting best practices for ACL injury is evolving and that which is available today is of low-quality. Clinical decision making is based on recommendations from international consensus groups (Diermeier et al 2020), and professional society guidelines.

Meniscal Procedures

Migliorini et al (2023) conducted a meta-analysis comparing outcomes of meniscal repair and meniscal resection in patients with symptomatic meniscal tears. The analysis included 20 comparative studies, consisting of 16 retrospective studies and four prospective clinical investigations, representing 31,783 patients. Studies evaluating all types of meniscal repairs and tears were eligible, regardless of surgical technique, tear etiology, or prior conservative treatment, provided that follow-up was at least 12 months. The mean patient age was 37.6 ± 14.0 years, mean BMI was 28.3 ± 3.2 kg/m², and the mean interval from injury to surgery was 12.1 ± 10.2 months. No randomized controlled trials were included, resulting in an overall moderate-to-high risk of bias. At a mean follow-up of 6 years, meniscal repair was associated with a lower rate of knee osteoarthritis compared with

partial meniscectomy; however, no significant differences were observed in patient-reported outcome measures, medial joint space width, or treatment failure rates.

Patellofemoral Realignment Procedures

Straume-Naesheim and colleagues (2026) reported three-year outcomes from a previously conducted randomized controlled trial (Erickson et al 2019) that compared recurrent instability in patients with recurrent lateral patellar dislocation without significant underlying anatomic risk factors who underwent medial patellofemoral ligament reconstruction (MPFL-R) (n=30) with those who received active rehabilitation alone (n=31). Individuals aged 12 to 30 years were eligible if they did not have severe trochlear dysplasia and had a tibial tuberosity-trochlear groove distance of ≤20 mm on computed tomography (CT). Participants were randomized to undergo knee arthroscopy with isolated MPFL-R followed by active rehabilitation (MPFL group) or knee arthroscopy without reconstruction followed by active rehabilitation (control group). At three years, outcomes included subjective persistent patellar instability and patient-reported outcome measures (PROMs), including the Knee injury and Osteoarthritis Outcome Score (KOOS), Kujala Knee Score, Cincinnati Knee Rating System, and Noyes Sports Activity Rating Scale. Persistent subjective patellar instability was reported by 5 patients in the MPFL group (16.7%) compared with 15 patients in the control group (53.6%), corresponding to an odds ratio of 5.8 (95% CI, 1.7-19.4; P=.003). Both groups demonstrated improvement during the first year of follow-up and significant improvements from baseline to three years across all PROMs. However, no statistically significant differences in PROM scores were observed between the groups at any follow-up time point.

The authors identified several study limitations, including the study methodology, small sample size, lack of questions specifically addressing persistent instability within the PROM instruments, and the single-center design using a single MPFL reconstruction technique.

Motion Restoration Procedures

Reddy and colleagues (2024) conducted a systematic review to characterize the treatment strategies and reported outcomes for arthrofibrosis following knee arthroscopy or anterior cruciate ligament reconstruction (ACLR), including differences between pediatric and adult populations. Of 1,208 articles identified, 42 studies met the eligibility criteria, including 29 (69.0%) involving adults and 13 (31.0%) involving pediatric patients. Manipulation under anesthesia (MUA), lysis of adhesions (LOA), or a combination of these procedures was evaluated in 39 studies (92.8%), while two studies (4.8%) evaluated pharmacologic treatment. Interpretation of the findings was limited by substantial variability in the definitions and diagnostic criteria used for knee arthrofibrosis. In addition, the review did not address arthrofibrosis resulting from other etiologies, including trauma or multiligamentous knee injury. Overall, MUA and/or LOA were the most frequently reported treatment strategies for arthrofibrosis following knee arthroscopy or ACLR.

Cartilage Restoration Techniques

Evidence is sufficient to consider osteochondral allografting medically appropriate as a technique to repair large (e.g., 10 cm2), full-thickness chondral defects of the knee caused by acute or repetitive trauma.

Several systematic reviews of randomized controlled trials (RCTs) have evaluated autologous osteochondral transplantation for cartilage repair of the knee in the short- and mid-term. When compared with abrasion techniques (e.g., microfracture, drilling), there is evidence that autologous osteochondral transplantation decreases failure rates and improves outcomes in patients with medium-size lesions (e.g., 2-6 cm^2) when measured at longer follow-up. This is believed to be due to the improved durability of the natural hyaline cartilage compared with the fibrocartilage that is obtained with abrasion techniques. Factors shown to affect success in observational studies are male sex, younger age, and lesions smaller than 3 cm^2. Thus, there is a relatively narrow range of lesion size for which autologous osteochondral transplantation is most effective. In addition, the best results have been observed with lesions on the femoral condyles, although treatment of trochlea and patella lesions also improves outcomes. Correction of malalignment is important for the success of the procedure.

Zamborsky and colleagues (2020) completed a systematic review and network meta-analysis that evaluated the most appropriate surgical interventions for patients with knee articular cartilage defects. A total of 21 articles (from 12 RCTs) were analyzed with a total population of 891 patients. Follow-up varied widely among the included studies, ranging from 12 months to 15 years. Of the surgical interventions evaluated, microfracture was associated with significantly higher failure rates compared to autologous chondrocyte implantation at 10 years of follow-up. No significant differences in failure rates were seen between microfracture and osteochondral autograft transplantation, matrix-induced autologous chondrocyte implantation, or characterized chondrocyte implantation at 2, 5, and 10 years of follow-up. Osteochondral autograft transplantation was associated with significantly more excellent or good results at >3 years of follow-up as compared to microfracture, whereas microfracture was associated with significantly poorer results as compared to autologous chondrocyte implantation and matrix-induced autologous chondrocyte implantation. No significant differences between the interventions were noted regarding reintervention, biopsy types, or adverse events. Based on efficacy and safety, autologous chondrocyte implantation was ranked as the best intervention for failure outcome at 10 years of follow-up, followed by osteochondral autograft transplantation, then microfracture. Microfracture was consistently ranked worse than cartilage repair techniques for other outcomes including quality of tissue repair and return-to-activity rates.

There is sufficient data published in the peer-reviewed literature to conclude that autologous chondrocyte transplantation results in relief of symptoms and improved function in patients who had failed conservative management and arthroscopic or other surgical treatments. Several studies include reports of histological examinations of the graft site showing stable hyaline cartilage after surgery.

Migliorini and colleagues conducted a systematic review of the literature in 2022 to evaluate the safety and efficacy of ACI for chondral defects of the knee in skeletally immature patients. A total of 9 studies (three prospective and six retrospective studies) representing 251 procedures were analyzed for patient reported outcome measures and complications. The mean age of the patients was 16.4 ±0.7 years, and the mean length of follow up was 44.2±29.4 months. Studies with follow up less than 12 months were not included in the review. Authors analyzed the KOOS score, Visual Analog Scale (VAS), Tegner Activity Scale, Lysholm Knee Score, and the International Knee

Document Committee (IKDC) Score. Increases were identified in the KOOS (+41.9/100 [P=0.003]), IKCD (+33.2/100 [P=<0.0001]), and Lysholm (+20.6/100 [P=0.02]). The VAS score was reduced by 3.6/10 (P=0.004) points. There was no statistically significant improvement noted in the Tegner scale. Authors expressed concern with the rate of complications. More than 12% of patients demonstrated graft hypertrophy and 5.6% of procedures were considered failures. It is believed that these numbers were underestimated given an unclear reporting of complications in several of the studies. Several other limitations of the studies were noted, including the lack of control groups creating a moderate risk of bias. There was also a limited sample size, and lack of quantitative data to conduct analyses. Further, there was a difference in the method of membrane application (suture versus fibrin glue) between studies which may have negatively impacted the results. Authors concluded that ACI of chondral defects in the knees of skeletally immature patients is effective in improving patient reported outcome measures, however the review was granted a level of evidence of III, noting that the safety profile of ACI in skeletally immature patients is controversial and requires further investigation.

PROFESSIONAL GUIDELINE(S)

The American Academy of Orthopaedic Surgeons (AAOS) has five knee-related clinical practice guidelines listed under its lower extremity quality programs:

Management of Acute Isolated Meniscal Pathology, 2024 [accessed 10/05/26]

Diagnosis and Treatment of Osteochondritis Dissecans, 2023 [accessed 10/05/26]

Management of Anterior Cruciate Ligament Injuries, 2022 [accessed 10/05/26]

Surgical Management of Osteoarthritis of the Knee, 2022 [accessed 10/05/26]

Management of Osteoarthritis of the Knee (Non-Arthroplasty), 2021[accessed 10/05/26]

In 2022, AAOS published evidence-based clinical practice guidelines on surgical management of osteoarthritis of the knee after a review of the clinical evidence available. Recommendations were defined as being "strong" if there was evidence from two or more high-quality studies, two or more moderate quality studies, or statements resulting in a strong or moderate strength following Evidence to Decision framework upgrading and/or downgrading.

The guidelines include the following as quality of evidence "high" and a "strong" strength of recommendation:

- There is no difference in postoperative functional scores between patients with a BMI <30 and obese patients (BMI 30-39.9); however, there may be increased risk of complications in morbidly obese patients (≥40), in particular, surgical site infections.
- Optimization of perioperative glucose control (<126mg/dl) after total knee arthroplasty should be attempted in diabetic and non-diabetic patients with HgbA1C <6.5, as hyperglycemia can lead to less favorable postoperative
- outcomes and higher complication rates.

- Evidence reports that there is no difference between patellar surfacing or non-patellar resurfacing in total knee arthroplasty
- Cruciate retaining (CR) and posterior stabilized (PS) total knee arthroplasty (TKA) designs have similarly efficacious/favorable postoperative outcomes.
- The practitioner should not use patient specific technology (e.g., guides, cutting blocks) because there is no significant difference in patient outcomes, function, or pain as compared to conventional total knee arthroplasty (TKA). Additionally, it does not reduce operating time, blood loss, length of stay, and/or complications.
- There is no difference in composite/functional outcomes or complications between kinematic or mechanical alignment principles in total knee arthroplasty.

The guidelines state the following as quality of evidence "high" and a "moderate" strength of recommendation:

- The practitioner can use unicompartmental arthroplasty vs total knee arthroplasty for patients with predominantly medial compartment osteoarthritis, as evidence reports improved patient reported and functional outcomes in the short term; however, long-term rates of revision in unicompartmental knee arthroplasty may be higher than total knee arthroplasty.
- There is no difference in outcomes, function, or pain between navigation and conventional techniques

The guidelines also provide "options" when there is little or no evidence on a particular topic. They state the following in regard to smoking cessation:

"Smoking cessation should be attempted before total knee arthroplasty, as a history of smoking may result in higher complications, lower functional scores, higher pain scores, and SSIs." (Quality of evidence: low, strength of option "consensus").

Cartilage Restoration Techniques

In 2017, The National Institute for Health and Care Excellence (NICE) published guidance on autologous chondrocyte implantation for treating symptomatic articular cartilage defects of the knee, recommending it be used as an option only if:

- The person has not had previous surgery to repair articular cartilage defects;
- There is minimal osteoarthritic damage to the knee (as assessed by clinicians experienced in investigating knee cartilage damage using a validated measure for knee osteoarthritis;
- The defect is over 2cm2;
- The procedure is done at a tertiary referral center.

In 2018, the National Institute for Health and Care Excellence (NICE) issued new guidance on mosaicplasty for symptomatic articular cartilage defects of the knee (IPG607). The guidance states that the evidence for the safety and efficacy of mosaicplasty for knee cartilage defects is adequate to

support the use of the procedure.

In 2022, the American Society of Pain and Neuroscience (ASPN) published the Consensus Guidelines on Interventional Therapies for Knee Pain (STEP Guidelines) (Hunter 2022). These guidelines were developed by a multidisciplinary panel of experts, including specialists in pain management, anesthesiology, orthopedic surgery, and rehabilitation medicine. The guideline makes the following recommendation statements:

- "Mosaicplasty is an effective long-term treatment option for patients 18–50 years old with hyaline cartilage lesions 2–5 cm2 (Level I, Grade A, Consensus Moderate)."
- OAT is an effective knee joint preservation technique (Level II, Grade C, Consensus Weak).

For larger lesions, autograft osteochondral harvesting carries a great of risk of morbidity and as such osteochondral allograft transplantation (OAT) has traditionally been used. Laboratory studies demonstrate superior chondrocyte viability with fresh allografts; however, good results and chondrocyte viability have still been demonstrated with frozen grafts implanted within 28 days from harvest."

REGULATORY STATUS

The U.S. Food and Drug Administration (FDA), through the Center for Devices and Radiological Health (CDRH), regulates medical devices used in orthopedic procedures, including certain implants, prostheses, fixation devices, surgical instruments, and other devices that may be used in knee surgery. Refer to the FDA regulations for orthopedic devices, 21 CFR Part 888. Available from: https://www.ecfr.gov/current/title-21/chapter-I/subchapter-H/part-888 [accessed 2026 Oct 6].

The FDA maintains information regarding medical device recalls and early alerts. Available from: https://www.fda.gov/medical-devices/medical-device-safety/medical-device-recalls-and-early-alerts [accessed 2026 Oct 6]

The FDA also regulates vaccines, blood and blood products, and biologics via the Center for Biologics Evaluation and Research (CBER) which ensures the safety, efficacy, and quality of these products. Refer to the FDA vaccines/blood/biologics website. Available from: https://www.fda.gov/vaccines-blood-biologics [accessed 2026 Oct 6]

Additionally, the FDA maintains information for consumers and health professionals on vaccine, blood and biologics warnings and other safety information. Available from: Recalls (Biologics) | FDA [accessed 2026 Oct 6]

Carticel received FDA approval in 1997 through a biologics license application for the culturing of chondrocytes. The approval restricted Carticel to use for the repair of symptomatic cartilaginous defects of the femoral condyle (medial, lateral, or trochlear), caused by acute or repetitive trauma in patients who have had an inadequate response to a prior arthroscopic or other surgical repair procedure. The product was phased out with the development of MACI.

In December 2016, the FDA approved MACI (autologous cultured chondrocytes on porcine collagen membrane) for the repair of symptomatic single or multiple full-thickness cartilage defects of the

knee, with or without bone involvement, in adults. MACI is the first FDA-approved, cellularized, scaffold product that applies tissue engineering processes to grow cells on scaffolds using healthy cartilage tissue from the patient's own knee. The package insert includes the following contraindications: known history of hypersensitivity to gentamicin, other aminoglycosides, or products of porcine or bovine origin, severe osteoarthritis of the knee, inflammatory arthritis, inflammatory joint disease, or uncorrected congenital blood coagulation disorders, prior knee surgery (within 6 months), excluding surgery to procure a biopsy or a concomitant procedure to prepare the knee for a MACI implant, inability to cooperate with a physician-prescribed post-surgical rehabilitation program.

CODE(S)

- Codes may not be covered under all circumstances.
- Code list may not be all inclusive (AMA and CMS code updates may occur more frequently than policy updates).
- (E/I)=Experimental/Investigational
- (NMN)=Not medically necessary/appropriate

CPT Codes

Code	Description
27310	Arthrotomy, knee, with exploration, drainage, or removal of foreign body (e.g., infection)
27332	Arthrotomy, with excision of semilunar cartilage (meniscectomy) knee; medial OR lateral
27333	Arthrotomy, with excision of semilunar cartilage (meniscectomy) knee; medial AND lateral
27334	Arthrotomy, with synovectomy, knee; anterior OR posterior
27340	Excision, prepatellar bursa
27365	Radical resection of tumor, femur or knee
27403	Arthrotomy with meniscus repair, knee
27405	Repair, primary, torn ligament and/or capsule, knee; collateral
27407	Repair, primary, torn ligament and/or capsule, knee; cruciate
27409	Repair, primary, torn ligament and/or capsule, knee; collateral and cruciate ligaments
27455	Osteotomy, proximal tibia, including fibular excision or osteotomy (includes correction of genu varus [bowleg] or genu valgus [knock-knee]); before epiphyseal closure

Code	Description
27466	Osteoplasty, femur; lengthening
27516	Closed treatment of distal femoral epiphyseal separation; without manipulation
27517	Closed treatment of distal femoral epiphyseal separation; with manipulation, with or without skin or skeletal traction
27519	Open treatment of distal femoral epiphyseal separation, includes internal fixation, when performed
27412	Autologous chondrocyte implantation, knee
27415	Osteochondral allograft, knee, open
27416	Osteochondral autograft(s), knee, open (e.g., mosaicplasty) (includes harvesting of autograft[s])
27418	Anterior tibial tubercleplasty (e.g., Maquet type procedure)
27420	Reconstruction of dislocating patella; (e.g., Hauser type procedure)
27422	Reconstruction of dislocating patella; with extensor realignment and/or muscle advancement or release (e.g., Campbell, Goldwaite type procedure)
27424	Reconstruction of dislocating patella; with patellectomy
27425	Lateral retinacular release, open
27427	Ligamentous reconstruction (augmentation), knee; extra-articular
27428	Ligamentous reconstruction (augmentation), knee; intra-articular (open)
27429	Ligamentous reconstruction (augmentation), knee; intra-articular (open) and extra-articular
27472	Repair, nonunion or malunion, femur, distal to head and neck; with iliac or other autogenous bone graft (includes obtaining graft)
27570	Manipulation of knee joint under general anesthesia (includes application of traction or other fixation devices)
29850	Arthroscopically aided treatment of intercondylar spine(s) and/or tuberosity fracture(s) of the knee, with or without manipulation; without internal or external fixation (includes arthroscopy)
29851	Arthroscopically aided treatment of intercondylar spine(s) and/or tuberosity fracture(s) of the knee, with or without manipulation; with internal or external fixation (includes arthroscopy)

Code	Description
29855	Arthroscopically aided treatment of tibial fracture, proximal (plateau); unicondylar, includes internal fixation, when performed (includes arthroscopy)
29856	Arthroscopically aided treatment of tibial fracture, proximal (plateau); bicondylar, includes internal fixation, when performed (includes arthroscopy)
29866	Arthroscopy, knee, surgical; osteochondral autograft(s) (e.g., mosaicplasty) (includes harvesting of the auto-graft[s])
29867	Arthroscopy, knee, surgical; osteochondral allograft (e.g., mosaicplasty)
29868	29868 Arthroscopy, knee, surgical; meniscal transplantation (includes arthrotomy for meniscal insertion), medial or lateral
29870	29870 Arthroscopy, knee, diagnostic, with or without synovial biopsy (separate procedure)
29873	Arthroscopy, knee, surgical; with lateral release
29874	Arthroscopy, knee, surgical; for removal of loose body or foreign body (eg, osteochondritis dissecans fragmentation, chondral fragmentation)
29875	Arthroscopy, knee, surgical; synovectomy, limited (eg, plica or shelf resection) (separate procedure)
29876	Arthroscopy, knee, surgical; synovectomy, major, 2 or more compartments (eg, medial or lateral)
29877	Arthroscopy, knee, surgical; debridement/shaving of articular cartilage (chondroplasty)
29879	Arthroscopy, knee, surgical; abrasion arthroplasty (includes chondroplasty where necessary) or multiple drilling or microfracture
29880	Arthroscopy, knee, surgical; with meniscectomy (medial AND lateral, including any meniscal shaving) including debridement/shaving of articular cartilage (chondroplasty), same or separate compartment(s), when performed
29881	Arthroscopy, knee, surgical; with meniscectomy (medial OR lateral, including any meniscal shaving) including
29882	Arthroscopy, knee, surgical; with meniscus repair (medial OR lateral)
29883	Arthroscopy, knee, surgical; with meniscus repair (medial AND lateral)
29884	Arthroscopy, knee, surgical; with lysis of adhesions, with or without manipulation (separate procedure)

Code	Description
29885	Arthroscopy, knee, surgical; drilling for osteochondritis dissecans with bone grafting, with or without internal fixation (including debridement of base of lesion)
29887	Arthroscopy, knee, surgical; drilling for intact osteochondritis dissecans lesion with internal fixation
29888	Arthroscopically aided anterior cruciate ligament repair/augmentation or reconstruction
29889	Arthroscopically aided posterior cruciate ligament repair/augmentation or reconstruction

Copyright © 2026 American Medical Association, Chicago, IL

HCPCS Codes

Code	Description
J7330	Autologous cultured chondrocytes, implant
S2112	Arthroscopy, knee, surgical for harvesting of cartilage (chondrocyte cells)

ICD10 Codes

Code	Description
M12.561-M12.569	Traumatic arthropathy, knee (code range)
M17.0-M17.9	Osteoarthritis of knee (code range)
M22.40-M22.42	Chondromalacia patella, knee (code range)
M23.8x1-M23.92	Other and unspecified internal derangement of knee (code range)
M25.861-M25.869	Other specified joint disorders, knee (code range)
M85.9	Disorder of bone density and structure, unspecified
M89.8X6	Other specified disorders of bone, lower leg
M89.9	Disorder of bone, unspecified
M93.261-M93.269	Osteochondritis dessicans knee (code range)

Code	Description
M94.261-M94.269	Chondromalacia of knee (code range)

REFERENCES

American Academy of Orthopaedic Surgeons (AAOS) [Internet]. Acute isolated meniscal pathology. 2024 Jun 10 [accessed 2026 Oct 06]. Available from: https://www.aaos.org/globalassets/quality-and-practice-resources/acute-meniscal-pathology/amp-cpg.pdf

American Academy of Orthopaedic Surgeons (AAOS) [Internet]. The diagnosis and treatment of osteochondritis dissecans-evidence based clinical practice guideline. 2023 Dec 01 [accessed 2026 Oct 06]. Available from: https://www.aaos.org/globalassets/quality-and-practice-resources/osteochondritis-dissecans/osteochondritis-dissecans-rapid-update-2023.pdf

American Academy of Orthopaedic Surgeons (AAOS) [Internet]. Management of anterior cruciate ligament injuries. 2022 Aug 22 [accessed 2026 Oct 06]. Available from: https://www.aaos.org/globalassets/quality-and-practice-resources/anterior-cruciate-ligament-injuries/aclcpg.pdf

American Academy of Orthopaedic Surgeons (AAOS) [Internet]. Management of osteoarthritis of the knee (non-arthroplasty). 2021 Aug 31 [accessed 2026 Oct 06]. Available from: https://www.aaos.org/globalassets/quality-and-practice-resources/osteoarthritis-of-the-knee/oak3cpg.pdf

American Academy of Orthopaedic Surgeons (AAOS) [Internet]. Surgical management of osteoarthritis of the knee. 2022 Dec 02 [accessed 2026 Oct 06]. Available from: https://www.aaos.org/globalassets/quality-and-practice-resources/surgical-management-knee/smoak2cpg.pdf

Akhtar M, et al. Outcomes of early versus delayed manipulation under anesthesia for stiffness following total knee arthroplasty: a systematic review and meta-analysis. J Arthroplasty. 2024 Nov;39(11):2872-2879.

American Academy of Orthopaedic Surgeons (AAOS) [Internet]. Management of osteoarthritis of the knee (non-arthroplasty). 2021 Aug 31 [accessed 2026 Oct 06] Available from: https://www.aaos.org/oak3cpg

Bateni CP, et al. ACR appropriateness criteria chronic knee pain: update 2026. American College of Radiology. 2026;23:1799-1809.

Bradley, KE et al. Younger patients are more likely to undergo arthroscopic meniscal repair and revision meniscal surgery in a large cross-sectional cohort. Arthroscopy. 2022 Oct;38(10):2875-83.

Crawford, DA, et al. Unicompartmental knee arthroplasty. Orthop Clin North Am. 2020 Apr;51(2),147-159.

Carlson VR, et al. Compliance with the AAOS guidelines for treatment of osteoarthritis of the knee: a survey of the American Association of Hip and Knee Surgeons. J Am Acad Orthop Surg. 2018 Feb 1; 26(3):103-107

Cotter, EJ, et al. Clinical considerations and joint preservation principles in the management of patients with symptomatic chondral lesions. Clin Sports Med. 2025 Jul 44(3):499-512.

Diermeier TA, et al. Treatment after ACL injury: panther symposium ACL treatment consensus group. Br J Sports Med. 2020 Jul 13;55:14-22.

Ericson BJ, et al. Isolated medial patellofemoral ligament reconstruction for patellar instability regardless of tibial tubercle-trochlear groove distance and patellar height: outcomes at 1 and 2 years. Am J Sports Med. 2019 May;47(6):1331-1337.

Forsythe B, et al. Corticosteroid injections 1 month before arthroscopic meniscectomy increase the risk of surgical-site infection. Arthroscopy. 2021 Sep;37(9): 2285-2890.

Hannon, CP, et al. 2023 American College of Rheumatology and American Association of Hip and Knee Surgeons clinical practice guideline for the optimal timing of elective hip or knee arthroplasty for patients with symptomatic moderate-to-severe osteoarthritis or advanced symptomatic osteonecrosis with secondary arthritis for whom nonoperative therapy is ineffective. Arthritis Care & Research. 2023;75(11):2227-2238.

Jolissaint JE, et al. An update on the management and optimization of the patient with morbid obesity undergoing hip or knee arthroplasty. Ortho Clin N Am. 2023;54:251-257.

Migliorini F, et al. Autologous chondrocyte implantation in the knee is effective in skeletally immature patients: a systematic review. Knee Surg Sports Traumatol Arthrosc. 2023;31:2518-2525.

Migliorini F, et al. Meniscectomy is associated with a higher rate of osteoarthritis compared to meniscal repair following acute tears: a meta-analysis. Knee Surgery, Sports Traumatology, Arthroscopy. 2023;31:5485-5495.

Migliorni N, et al. Surgical management of focal chondral defects of the knee: a Bayesian network meta-analysis. Journal of Orthopaedic Surgery and Research. 2021(16):543-556.

National Institute for Health and Care Excellence (NICE) [Internet]. Osteoarthritis in over 16s: diagnosis and management. 2022 Oct 19 [accessed 2026 Oct 06]. Available from: https://www.nice.org.uk/guidance/ng226

Nowak, LL and Schemitsch EH. Trends in outpatient total knee arthroplasty from 2012 to 2020. The Journal of Arthroplasty. 2023;38:S21-S25.

O'Connor, D, et al. Arthroscopic surgery for degenerative knee disease (osteoarthritis including degenerative meniscal tears). Cochrane Database of Systematic Reviews. 2022. Issue 3. Art. No.: CD014328.

Palmer JS, et al. Surgical interventions for symptomatic mild to moderate knee osteoarthritis. Cochrane Database of Systematic Reviews. 2019, Issue 7. Art. No.:CD012128.

Rahardja R, et al. Early manipulation under anaesthesia for stiffness following total knee arthroplasty is associated with a greater gain in knee flexion. Knee Surg Sports Traumatol Arthrosc. 2023 Mar;31(3):979-985.

Reddy R, et al. Manipulation under anesthesia and lysis of adhesions are the most commonly reported treatments for arthrofibrosis of the knee after arthroscopy or anterior cruciate ligament reconstruction in both pediatric and adult patients. Arthroscopy, Sports Medicine and Rehabilitation. 2024 April;6(2):1-12.

Roaten J, et al. Osteochondritis dissecans lesions of the pediatric and adolescent knee. Orthop Clin North America. 2022 Oct;53(4):445-459.

Skou ST, et al. A randomized, controlled trial of total knee replacement. NEJM. 22 Oct 2015;373(17):1597-1606.

Skou ST, et al. Two-year outcome from two parallel randomized trails on total knee replacement and non-surgical treatment of knee osteoarthritis. Osteoarthritis and Cartilage; 2017:S42.

Straum-Naesheim TM, et al. Medial patellofemoral ligament reconstruction vs. nonoperative treatment for recurrent lateral patellar dislocation: three-year results from a randomized controlled trial. The American Journal of Sports Medicine. 2026;54(4):773-779.

Tischer T, et al. Management of anterior cruciate ligament revision in adults: the 2022 ESSKA consensus part III—indications for different clinical scenarios using the RAND/UCLA appropriateness method. Knee Surg Sports Traumatol Arthrosc. 2023 May 3; 31(11):4662-46.

Thompson A, et al. AHA/ACC/ACS/ASNC/HRS/SCA/SCCT/SCMR/SVM Guideline for perioperative cardiovascular management for noncardiac surgery, a report of the American College of Cardiology/American Heart Association Joint Committee on clinical practice guidelines. Circulation. 2024 Sep;150(19): e351-e442.

Xu Z, et al. How to evaluate and treat skeletally mature patients with patellar dislocation. Arthroscopy Techniques; 2021 Mar;10(3), e721-e726.

Zamborsky R and Danisovic L. Surgical techniques for knee cartilage repair: an updated large-scale systematic review and network meta-analysis of randomized controlled trials. Arthroscopy. 2020 Mar;36(3):845-858.

SEARCH TERMS

Not Applicable

CENTERS FOR MEDICARE AND MEDICAID SERVICES (CMS)

Total Joint Arthroplasty (LCD L36039) [accessed 2026 Sept 12]

PRODUCT DISCLAIMER

- Services are contract dependent; if a product does not cover a service, medical policy criteria do

not apply.

- If a commercial product (including an Essential Plan or Child Health Plus product) covers a specific service, medical policy criteria apply to the benefit.
- If a Medicaid product covers a specific service, and there are no New York State Medicaid guidelines (eMedNY) criteria, medical policy criteria apply to the benefit.
- If a Medicare product (including Medicare HMO-Dual Special Needs Program (DSNP) product) covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit.
- If a Medicare HMO-Dual Special Needs Program (DSNP) product DOES NOT cover a specific service, please refer to the Medicaid Product coverage line.

POLICY HISTORY/REVISION	
Committee Approval Dates	
09/17/26, 10/22/26	
Date	**Summary of Changes**
01/01/27	• Original effective date.
10/22/26	• Off-cycle update. Removal of site of service criteria.
09/17/26	• New Policy